

Alexandra J. Weigand

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Education

- San Diego State University/University of California, San Diego Joint Doctoral Program in Clinical Psychology 2018 –
- Advisor: Mark W. Bondi, Ph.D., ABPP/CN
 - Area of Emphasis: Neuropsychology
- Washington University in St. Louis 2013 – 2017
- A.B. Major in Philosophy-Neuroscience-Philosophy: Cognitive Neuroscience with Arts and Sciences Honors: Cum Laude
 - Second Major in Psychological & Brain Sciences
 - Overall GPA – 3.74/4.00; Psychology GPA – 3.98/4.00
 - Honors Thesis: *Pathological Biomarkers and Cognitive Change in Parkinson Disease*

Honors and Awards

- National Science Foundation Graduate Research Fellowship 2018 – 2023
- *The Role of the Locus Coeruleus in Cognitive Aging*
- First Place in Session for Empirical Paper Presentation, Missouri Undergraduate Psychology Conference 2015
- *The Effects of Location of Deep Brain Stimulation of the Subthalamic Nucleus on Mood and its Neural Correlates in Parkinson Disease*
- First Place in Session for Empirical Poster Presentation, Missouri Undergraduate Psychology Conference 2015
- *Subliminal Processing in Visual Word Recognition Yields a First Letter Advantage*

Peer-Reviewed Publications*

- 1) Edmonds, E.C., **Weigand, A.J.**, Thomas, K.R., Eppig, J., Delano-Wood, L., Galasko, D.R., Salmon, D.P., & Bondi, M.W. (In press). Inaccuracy of Self-Reported Cognitive Complaints over 24 Months in Empirically-Derived Subtypes of Mild Cognitive Impairment. *Journal of the International Neuropsychological Society*.
- 2) Bangen, K.J., Werhane, M.L., **Weigand, A.J.**, Edmonds, E.C., Delano-Wood, L., Thomas, K.R., Nation, D.A., Evangelista, N.D., Clark, A.L., Liu, T.T., Bondi, M.W. (In press). Regional Cerebral Blood Flow Changes and Neuropsychological Function in Nondemented Older Adults with Diabetes. *Frontiers Aging Neuroscience*.
- 3) Aschenbrenner, A. J., Balota, D. A., **Weigand, A. J.**, Scaltritti, M., & Besner, D. (2017). The First Letter Position Effect in Visual Word Recognition: The Role of Spatial Attention. *Journal of Experimental Psychology: Human Perception and Performance*, 43(4), 700-718.



Publications (Under Review)*

- 1) **Weigand, A.J.**, Bondi, M.W., Thomas, K.R., Galasko, D.G., Salmon, D.P., Sewell, D.D., Brewer, J.B., Feldman, H.H., & Delano-Wood, L. (Under review). Anticholinergic Medications Interact with Alzheimer's Disease Risk Factors to Increase Risk of Incident MCI and Accelerate Trajectories of Cognitive Decline.
- 2) Bangen, K.J., **Weigand, A.J.**, Delano-Wood, L., Thomas, K.R., Eppig, J., Werhane, M.L., Edmonds, E.C., & Bondi, M.W. (Under review). Cognitive Dispersion as a Sensitive Marker for Early Neurodegenerative Changes and Functional Decline in Non-demented Older Adults.
- 3) Campbell, M.C., **Weigand, A.J.**, Lessov-Schlaggar, C.N., & Perlmutter, J.S. (Under review). Parkinson Disease Clinical Subtypes and Mortality Risk.
- 4) Thomas, K.R., Eppig, J.S., **Weigand, A.J.**, Edmonds, E.C., Wong, C.G., Jak, A.J., Delano-Wood, L., Galasko, D.R., Salmon, D.P., Bondi, M.W. (Under review). Artificially Low MCI to Normal Reversion Rate in the Alzheimer's Disease Neuroimaging Initiative.
- 5) Wong, C.G., Thomas, K.R., Edmonds, E.C., **Weigand, A.J.**, Bangen, K.J., Eppig, J.S., Jak, A.J., Devine, S.A., Delano-Wood, L., Libon, D.J., Edland, S.D., Au, R., & Bondi, M.W. (Under review). Neuropsychological Criteria for Mild Cognitive Impairment in the Framingham Heart Study's Oldest-Old.
- 6) Eppig, J.S., Thomas, K.R., Eglit, G., Wong, C.G., **Weigand, A.J.**, Edmonds, E.C., Salmon, D.P., Galasko, D.R., & Bondi, M.W. (Under review). A Comparison of the Innogenetics/Fujirebio AlzBio3 and Roche Elecsys Electrochemiluminescence Immunoassays in Alzheimer's Disease Cerebrospinal Biofluids.
- 7) Edmonds, E.C., McDonald, C., Marshall, A., Thomas, K.R., Eppig, J., **Weigand, A.J.**, Delano-Wood, L., Galasko, D.R., Salmon, D.P., Bondi, M.W. (Under review). Improved Staging of MCI Using a Neuropsychological Approach.

Publications (In Preparation)*

- 1) Thomas, K.R., Edmonds, E.C., Eppig, J.S., Wong, C.G., **Weigand, A.J.**, Bangen, K.J., Jak, A.J., Delano-Wood, L., Galasko, D.R., Salmon, D.P., Edland, S.D., & Bondi, M.W. (In preparation). MCI-to-normal Reversion Using Comprehensive Neuropsychological Criteria in the Alzheimer's Disease Neuroimaging Initiative.

Abstracts and Presentations*

- 1) **Weigand, A.J.**, Bangen, K.J., Thomas, K.R., Salmon, D.P., Galasko, D.R., & Bondi, M.W. (2019, February). *Medial Temporal Lobe Tau in the Absence of Amyloid Likely Represents an Early Stage of Alzheimer's Disease Rather than an Age-related Phenomenon*. Submitted to the International Neuropsychological Society Annual Meeting, New York, NY.

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2) Edmonds, E.C., **Weigand, A.J.**, Hatton, S.N., Marshall, A., Thomas, K.R., Eppig, J., Ayala, D.A., Bondi, M.W., & McDonald, C.R. (2019, February). *Patterns of Longitudinal Cortical Atrophy in Empirically-derived MCI Subtypes*. Submitted to the International Neuropsychological Society Annual Meeting, New York, NY.

3) Clark, A.L., **Weigand, A.J.**, Bangen, K.J., Merritt, V., Sorg, S.F., Schiehser, D.M., Bondi, M.W., & Delano-Wood, L. (2019, February). *Advancing Age is Associated with Reduced CBF in AD Vulnerable Regions Amongst Military Veterans with mTBI*. Submitted to the International Neuropsychological Society Annual Meeting, New York, NY.

4) Bangen, K.J., Werhane, M.L., **Weigand, A.J.**, Edmonds, E.C., Delano-Wood, L., Thomas, K.R., Nation, D.A., Evangelista, N.D., Clark, A.L., & Bondi, M.W. (2019, February). *Reduced Regional Cerebral Blood Flow is Associated with Poorer Cognition in Older Adults with Type 2 Diabetes*. Submitted to the International Neuropsychological Society Annual Meeting, New York, NY.

5) Werhane, M.L., Thomas, K.R., Bangen, K.J., **Weigand, A.J.**, Edmonds, E.C., Nation, D.A., Sundermann, E.S., Bondi, M.W., & Delano-Wood, L. (2019, February). *Arterial Stiffening Moderates the Relationship Between Diabetes and White Matter Lesion Burden in Older Adults with Mild Cognitive Impairment*. Submitted to the International Neuropsychological Society Annual Meeting, New York, NY.

6) Sundermann, E.E., Thomas, K.R., Bangen, K.J., **Weigand, A.J.**, Eppig, J.S., Werhane, M.L., Edmonds, E.C., Wong, C.G., Bondi, M.W., & Delano-Wood, L. (2019, February). *Sex Effects of Prediabetes on Cognition and Brain Metabolism using FDG PET: An Alzheimer's Disease Neuroimaging Initiative Study*. Submitted to the International Neuropsychological Society Annual Meeting, New York, NY.

7) Thomas, K.R., Edmonds, E.C., Cao, X., Wong, C.G., **Weigand, A.J.**, Cooper, S., Galasko, D.R., Salmon, D.P., & Bondi, M.W. (2019, February). *Objective Subtle Cognitive Decline, but Not Subjective Memory Complaint, Predicts Progression in Cognitively Normal Participants*. Submitted to the International Neuropsychological Society Annual Meeting, New York, NY.

8) Eppig, J.S., Eglit, G.M.L., Thomas, K.R., Wong, C.G., **Weigand, A.J.**, Edmonds, E.C., Galasko, D.R., Salmon, D.P., & Bondi, M.W. (2019, February). *Empirical Classification of CSF Alzheimer's Disease Biomarker Profiles in ADNI*. Submitted to the International Neuropsychological Society Annual Meeting, New York, NY.

9) Walsh, M.J., Sorg, S.F., Holiday, K.A., Werhane, M.L., Clark, A.L., Silverthorn, J.L., Merritt, V.C., **Weigand, A.J.**, Bondi, M.W., Schiehser, D.M., & Delano-Wood, L. (2019, February). *Use of Selective Serotonin Reuptake Inhibitors Moderates the Relationship Between Hippocampal Volume and Verbal Learning in Mild Traumatic Brain Injury*. Submitted to the International Neuropsychological Society Annual Meeting, New York, NY.

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10) **Weigand, A.J.**, Delano-Wood, L., Bangen, K.J., Edmonds, E.C., Eppig, J.S., Werhane, M.L., Igwe, K.C., Granholm, E., Frank, L.R., Brickman, A.M., & Bondi, M.W. (2018, July). *Reduced Locus Coeruleus Integrity is Associated with Elevated White Matter Lesion Pathology in Nondemented Older Adults*. Poster presentation by Alexandra Weigand at the Alzheimer's Association International Conference, Chicago, IL.

11) **Weigand, A.J.**, Bondi, M.W., Thomas, K.R., Galasko, D.R., Salmon, D.P., Sewell, D.D., Brewer, J.B., Feldman, H.H., & Delano-Wood, L. (2018, July). *Anticholinergic Medication Use Interacts with APOE-e4 Genotype to Increase Risk for Incident MCI Over a 10-Year Period Among Cognitively Healthy Older Adults*. Poster presentation by Alexandra Weigand at the Alzheimer's Association International Conference, Chicago, IL.

12) Bangen, K.J., **Weigand, A.J.**, Delano-Wood, L., Thomas, K.R., Werhane, M.L., Edmonds, E.C., & Bondi, M.W. (2018, July). *Cognitive Dispersion as a Sensitive Marker for Early Neurodegenerative Changes in Non-demented Older Adults: An Alzheimer's Disease Neuroimaging Initiative Study*. Poster presentation by Katherine Bangen at the Alzheimer's Association International Conference, Chicago, IL.

13) Thomas, K.R., Bangen, K.J., **Weigand, A.J.**, Eppig, J.S., Werhane, M.L., Edmonds, E.C., Sundermann, E., Wong, C.G., Delano-Wood, L., & Bondi, M.W. *Diabetes Moderates the Rate of Functional Decline in Cognitively Normal Older Adults at Risk for Alzheimer's Disease*. (2018, July). Poster presentation by Kelsey Thomas at the Alzheimer's Association International Conference, Chicago, IL.

14) Edmonds, E.C., McDonald, C.R., Eppig, J., Thomas, K.R., Marshall, A., **Weigand, A.J.**, Delano-Wood, L., Salmon, D.P., & Bondi, M.W. (2018, July). *Neuropsychological staging of early and late MCI strengthens associations with cortical thickness biomarkers*. Poster presentation by Emily Edmonds at the Alzheimer's Association International Conference, Chicago, IL.

15) **Weigand, A.J.**, Edmonds, E.C., Delano-Wood, L., & Bondi, M.W. (2018, February). *Inaccuracy of Subjective Cognitive Complaints in the Diagnosis of Mild Cognitive Impairment*. Paper presentation by Alexandra Weigand at the International Neuropsychological Society Annual Meeting, Washington D.C.

16) Campbell, M.C., **Weigand, A.J.**, Lessov-Schlaggar, C.N., & Perlmutter, J.S. (2016, April). *Classification of Clinical Subtypes in Parkinson Disease Based on Phenotypic Variability in the Motor, Cognitive, and Psychiatric Domains*. Paper presentation by Dr. Joel Perlmutter at the annual meeting of the American Academy of Neurology, Vancouver, BC, Canada.

17) **Weigand, A.J.**, Aschenbrenner, A.J., & Balota, D.A. (2015, November). *Subliminal Processing in Visual Word Recognition Yields a First Letter Advantage*. Poster presentation by Alexandra Weigand at the Missouri Undergraduate Psychology Conference, St. Charles, MO.

18) **Weigand, A.J.**, Campbell, M.C., Ushe, M., Hartlein, J.M., & Perlmutter, J.S. (2015, November). *The Effects of Location of Deep Brain Stimulation of the Subthalamic Nucleus on*

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Mood and its Neural Correlates in Parkinson Disease. Paper presentation by Alexandra Weigand at the Missouri Undergraduate Psychology Conference, St. Charles, MO.

Research Experience

Research Associate at the University of California, San Diego and VA San Diego Healthcare System under Dr. Mark Bondi and Dr. Emily Edmonds 2017 – 2018

- Investigated cognitive, neuroimaging, and biological markers predictive of cognitive decline in preclinical Alzheimer's disease
- Responsibilities include neuropsychological assessment and scoring, neuroimaging acquisition and processing, assisting with biospecimen collection, data management, coordination with IRBs, and administrative assistance

Research Assistant in Movement Disorders Lab at Washington University School of Medicine under Dr. Meghan Campbell and Dr. Joel Perlmutter 2014 – 2017

- Investigated neuropsychological and neuroimaging changes in Parkinson Disease
- Responsibilities included data processing, scoring neuropsychological assessments, statistical analysis, conducting literature reviews, presenting research at lab meetings, and attending weekly seminars

Research Assistant in Cognitive Psychology Lab at Washington University under Dr. Dave Balota and Dr. Jan Duchek 2014 – 2017

- Investigated the perceptual and attentional mechanisms involved in the preferential processing of the first letter during visual word recognition
- Investigated the relationships between personality variables, activity engagement, cognition, and CSF biomarkers in healthy older adults and preclinical Alzheimer's disease
- Responsibilities included experimental design, programming tasks, data collection, data processing, statistical analysis, and attending weekly lab meetings

Clinical Experience

Volunteer Psychometrist with the Memory, Aging, & Resilience Clinic at the University of California, San Diego 2017 – 2018

- Involved in the administration of a neuropsychological evaluation for older adults with memory concerns

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Teaching Experience

- Teaching Assistant for Cognitive Psychology, Washington University 2016, 2017
- Responsibilities included reviewing class material during office hours, managing and grading examinations, and assisting with writing examinations

Professional Experience

- Associate Editor for the *Journal of Young Investigators* 2016 – 2017
- Responsibilities included reviewing scientific manuscripts submitted for publication, including both original empirical articles and literature review articles

Professional Memberships

- Student Member of the International Society to Advance Alzheimer's Research and Treatment 2018 –
- Member of the Society for the Improvement of Psychological Science 2017 –
- Student Affiliate of the Society for Clinical Neuropsychology 2016 –
- Student Affiliate of the Association for Psychological Science 2016 –
- Member of Psi Chi Honor Society 2016 – 2017

Technical Skills

Statistical analysis: SPSS, R, Matlab, Python, JASP

Neuroimaging analysis: SPM, Matlab, FSL, AFNI, FreeSurfer, QUEST

Other: REDCap, E-prime, PsychoPy

*Please refer to <https://sites.google.com/view/alexandrajweigand/> for an updated listing of publications and abstracts